(19) World Intellectual Property Organization International Bureau



550075

(43) International Publication Date 7 October 2004 (07.10.2004)

PCT

(10) International Publication Number WO 2004/086003 A1

(51) International Patent Classification7:

G01N 9/00

(21) International Application Number:

PCT/US2004/008552

(22) International Filing Date: 19 March 2004 (19.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/456,517

21 March 2003 (21.03.2003) US

(71) Applicants (for all designated States except US): SYMYX TECHNOLOGIES, INC. [US/US]: 3100 Central Expressway, Santa Clara, CA 95051 (US). HELLA KG-HUECK & CO.; Plant 2, Beckumer Strass 130, 59552 Lippstadt (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KOLOSOV, Oleg [RU/US]; 1045 Arlington Lane, San Jose, CA 95129 (US). MATSIEV, Leonid [RU/US]; 1060 Alderbrook Lane, San Jose, CA 94063 (US). VARNI, John, F. [US/US]; 16566 Topping Way. Los Gatos, CA 95032 (US). DALES, G., Cameron [US/US]; 18540 Perego Way, Saratoga, CA 95070 (US). LUDTKE, Olaf [DE/DE]; Dorfstr. 25, 27729 Vollersode-Wallhofen (DE). WULLNER, Dirk [DE/DE]; Niemollerallee 4, 59555 Lippstadt (DE). BUHRDORF, Andreas [DE/DE]; Im Grunen Winkel 70, 28201 Bremen (DE). DOBRINSKI, Helko [DE/DE]; Millstatter Str. 3, 28359 Bremen (DE).

(74) Agent: DOBRUSIN, Eric, M.; Dobrusin & Thennisch PC, Suite 311, 401 South Old Woodward Avenue, Birmingham, MI 48009 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

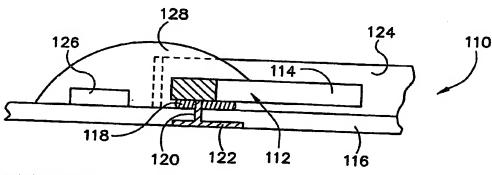
Published:

with international search report

 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RESONATOR SENSOR ASSEMBLY



(57) Abstract: An improved method and assembly, wherein the method generally includes the steps of providing a coated or uncoated sensor element having an exposed sensing surface; attaching the sensor element to a platform so that the exposed sensing surface is spaced from the platform; and optionally applying a protective layer over the platform while maintaining the sensing surface as exposed. The assembly includes a resonator having a free portion with a sensing surface is incorporated onto a platform, components of the sensor are physically shielded from harsh operating conditions, the requisite space is maintained between the free portion of the resonator and the platform, and the sensing surface of the resonator remains exposed for sensing.